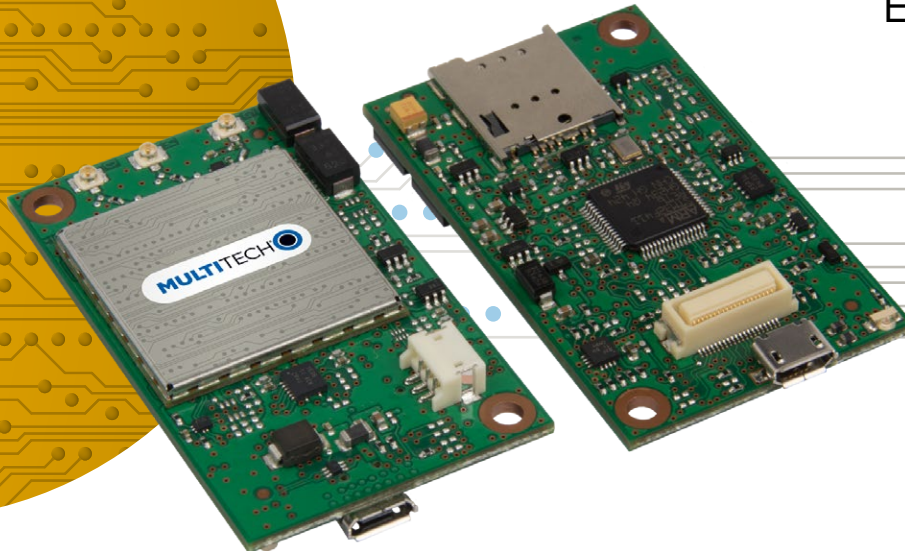# MULTITECH®
CREATE • CONNECT • COMMUNICATE

MultiConnect® Dragonfly™
Embedded Cellular SoM (System-on-Module)

ARM mbed

The MultiConnect® Dragonfly™ cellular SoM's are fully certified and MNO approved, ready-to-integrate modules that offer developers the functionality of a programmable computing platform with the convenience of an onboard cellular radio all in one compact design. Dragonfly is programmable using ARM® mbed™ allowing for rapid prototyping, development and deployment. With its integrated Cortex®-M4 processor, developers can host their application and have access to a full suite of interfaces for connecting sensors or other remote assets.

BENEFITS

- End device certified by leading carriers
- Family of cellular options include 2G 1xRTT, 3G HSPA+, 3G EV-DO and 4G-LTE
- Developer friendly to integrate, quick to deploy and scale assets
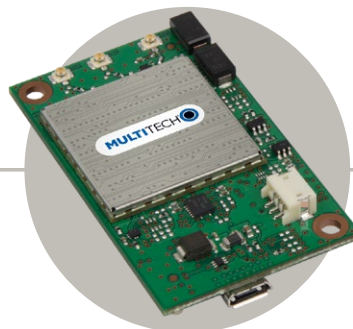- Long solution lifecycle reduces redesign time and cost

FEATURES

- Lightweight SoM ideal for most IoT applications
- On-board GNSS or GPS for fast and accurate location fix (3G models)
- Multiple I/O interfaces for connecting most any "Thing"
- Design in or retrofit

Your Devices & Data

- Energy
- Financial / Retail
- Healthcare
- Remote Monitoring

Connecting Your Devices

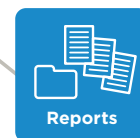Wireless Service Provider

Asset Management Platform

Insight + Action + Control

Email / Alerts

Reports

Real-Time Management

HIGHLIGHTS

Host Your Applications

As the first ARM mbed cellular SoM listed on mbed.org that is industry certified and deployment ready, applications can be written and compiled quickly online using developer friendly libraries, downloaded and hosted within the Dragonfly. Decision making and control is distributed to the edge, enabling data to be more actionable without the heavy lift required to implement complex M2M middleware and security protocols needed to deploy a low touch install.

Design in or Retrofit

The MultiConnect Dragonfly can be used as an embedded cellular SoM providing the maximum in design and application flexibility or it can be used as an embedded cellular modem controlled through AT commands requiring little or no modification to your design. Connecting to the Dragonfly through its 40-pin board-to-board connector gives you access to all the programmable I/O interfaces. You can also connect to the Dragonfly using the industry standard micro USB port affording you the quickest time to market when your application only requires basic cellular connectivity.

SPECIFICATIONS

Model	MTQ-H5-B01 MTQ-H5-B02	MTQ-EV3-B01 MTQ-EV3-B02	MTQ-C2-B01 MTQ-C2-B02
Performance	HSPA+	EV-Do Rev. A	CDMA2000 1xRTT
Frequency Band (MHz)	3G: 850/900/AWS 1700/1900/2100 MHz 2G: 850/900/1800/1900 MHz	3G/2G: 800/1900 MHz	2G: 800/1900 MHz
TCP/IP Functions	FTP, HTTP, SMTP, SSL, TCP, UDP		
Connectors	3 UFL (Cellular, Rx Diversity & GPS) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	2 UFL (Cellular & GPS) 1xMicro USB, 1x 40-Pin Board-to-Board	1 UFL (Cellular) 1xMicro USB, 1x 40-Pin Board-to-Board
Host Processor	Cortex M4 (STM32F411RET) 512 Kbytes of Flash memory and 96 Kbytes of SRAM (B01)		
I/O	1 x UART, 1 x HS USB, 1 x SPI, 1 x I2C, up to 6 analog inputs and up to 16 digital input/output (B01) 1 x UART, 1 x HS USB (B02)		
Dimensions	58.4mm x 34.9mm (2.3 x 1.375 inches)		
Power Draw*	5VDC; 25mA sleep, 64mA idle, 635mA max power (B01) 5VDC; 36mA sleep, 42mA idle, 676mA max power (B02)	5VDC; 6mA sleep, 57mA idle, 707mA max power (B01) 5VDC; 24mA sleep, 49mA idle, 644mA max power (B02)	5VDC; 22mA sleep, 63mA idle, 690mA max power (B01) 5VDC; 24mA sleep, 53mA idle, 640mA max power (B02)
Input Voltage	5VDC		
Environmental			
Operating Temperature	-40° to +85° C		
Storage Temperature	-40° to +85° C		
Relative Humidity	20% to 90% RH, non-condensing		
Certifications			
EMC Compliance	FCC Part 15 Class B, EN55022, EN55024	FCC Part 15 Class B	
Radio Compliance	FCC Part 22, FCC Part 24, RSS 132, RSS 133, EN 301 511, EN 301 489-1, EN 301 489-7, EN 301 489-24	FCC Part 22, FCC Part 24	
Safety	UL 60950-1 2nd ED, cUL 60950-1 2nd ED, EN 60950-1 2nd ED, AS/NZS 60950-1 2nd ED	UL/cUL 60950-1 2nd ED, IEC 60950-1 2nd ED +Am.2	
Network	PTCRB	N/A	
Carrier	AT&T/T-Mobile (Bell, Rogers, Telus planned)	Sprint, Aeris	
Warranty	2-Years		

*See Device Guide for More Detailed Information

ORDERING INFORMATION

Model	Description	Region
MTQ-H5-B01	HSPA+ Embedded Cellular SoM w/GPS	Global
MTQ-H5-B02	HSPA+ Embedded Modem w/GPS	Global
MTQ-EV3-B01-N2	EV-DO Embedded Cellular SoM w/GNSS (Sprint)	USA
MTQ-EV3-B02-N2	Embedded EV-DO Modem w/GNSS (Sprint)	USA
MTQ-EV3-B01-N16	EV-DO Embedded Cellular SoM w/GNSS (Aeris)	USA
MTQ-EV3-B02-N16	Embedded EV-DO Modem w/GNSS (Aeris)	USA
MTQ-C2-B01-N2	1xRTT Embedded Cellular SoM (Sprint)	USA
MTQ-C2-B02-N2	Embedded 1xRTT Modem (Sprint)	USA
MTQ-C2-B01-N16	1xRTT Embedded Cellular SoM (Aeris)	USA
MTQ-C2-B02-N16	Embedded 1xRTT Modem (Aeris)	USA

Developer Kit

Model	Description	Region
MTUDK2-ST-CELL	SocketModem® & Dragonfly Developer Kit	Global

Go to www.multitech.com for detailed product model numbers.

Services & Warranty

MultiTech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations.

Installation Support

MultiTech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced MultiTech technical support engineer, to guide you through the installation process for our products.

Technical Support Services

At MultiTech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your MultiTech representative or visit www.multitech.com/support.go

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